

Milan 18.xii.52

Dear Joshua,

It is a long time I do not hear from you. Are there any news on K-12, and especially Hfr? I have been mostly concerned with the F^r gene. Most of the time was spent looking for a linkage with some of the ordinary markers, but none was found so far, except a very doubtful one with methionine, which will probably disappear on further testing. It is rather annoying to deal with something which seems to segregate so beautifully as if it were on another chromosome, and find nothing linked with it. The tests are unfortunately rather tedious. I have since long prepared sera to try and discriminate serologically between F⁺ and F⁻ but have not yet undertaken the lengthy adsorptions which would be necessary if they were to come into some use. The most interesting result obtained in the past week is that E-agents, other than the K-12 one, allow a cross to occur between two F^r strains. This is the result, the consequences of which I am trying to work out at present. Concerning linkage of F^r and other genes, beside trying new biochemicals, the only hope I have at present is that of bound to an F^r recombinant from an F⁺ x F^r cross which, different from all other F^r recombinants tested, when crossed to F⁺ does not give F⁺:F^r recombinants in the 1:1 ratio but only (or almost only) F^r. The case is probably a very complicated one. I shall prepare a summary of work done so far as I should like to have your opinion on it, and send it to you. Another experiment which I have in mind, and may throw some light on the whole obscure problem is to let F^r act as F⁺ in a cross with F⁻ by using the foreign F⁺ agent mentioned above. The trouble is that this agent is very unstable when transferred in the K-12 line, and good results are obtained only with ménage à trois experiments. At the present stage there may still be some doubt that this agent acts as a hormone, although some low recombination rates have been obtained with F^r treated with the F⁺ and isolated.

Best wishes for Xmas and the New Year,

Yours

Luca.

Have you done anything about it?